APPENDIX 4-A

STORAGE OF BAUXITE

1. *Description*

a. Bauxite is a rock or clay-like substance, ranging in color from dull white through pink, to a brownish red, depending on the iron content of the ore. It is a mixture of materials composed principally of hydrous oxides of aluminum. Bauxite may be received for storage in any of the following grades.

(1) Metallurgical Grade Ore, Crude (Principal Sources: Domestic, Guyana, Indonesia, Jamaica, Surinam). Purchase Specification P-5A & P-5B.

(2) Refractory Grade, Calcined (Principal Sources: Guyana, Surinam). Calcined material will range in size from fine to small lumps, while all other material will range in size from fine to large lumps. Purchase Specification P-5C.

2. *Packaging*. All grades of bauxite are delivered in bulk.

3. *Marking*. Two metal embossed pile signs with the pile number, material name, country of origin and major elements, as specified by the DNSC-OL, shall be placed at each end of the pile.

4. *Storage*

a. Metallurgical grade bauxite shall be stored on open improved space equivalent to types A or B.

b. Refractory grade shall be stored on open improved space equivalent to type D.

c. A description of the types of improved space will be found in this chapter.

d. Prior to the forming of new piles, any special work required, such as preparation of the pad, installation of curbing, or barriers, will be designated by the DNSC-OL.

e. Bauxite will be segregated into piles by country of origin, grade, and if specifically directed by the DNSC-OL, by contract. Pile numbers will be assigned by the receiving depot or the DNSC-OL.

f. In laying out the storage area, the piles shall be located so that a 25-foot clearance will be maintained between the toes of finished piles of bauxite and other ores. A minimum clearance of 5 feet is required between individual bauxite piles regardless of producer. Commingling of material is not permissible unless specifically authorized by the DNSC-OL. All piles shall be so laid out as to be accessible for outloading.

g. Metallurgical bauxite is usually stored in piles of very large size with large surface areas. Berms and decant pipes should be installed on piles when specifically authorized by the DNSC-OL. Berms should be built along the perimeter at the top of the piles to prevent rain water from running down the sides of the piles and causing gullies and erosion loss. Decant pipes should be placed through the berms to catch the

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STORAGE OF BAUXITE

run-off water and carry it down and away from the piles. Local conditions will govern the number of decant pipes required for each pile.

h. Vegetation in bauxite is deleterious in the alumina production process. Trees, bushes, or other extensive vegetation growth on bauxite piles should be removed, except for the appoved grass to stop erosion.

5. *Precautions To Be Taken*

a. *Health*. Dust should be minimized during receipt and/or outloading ore.

b. *General*. Special care must be exercised in the case of refractory grade ore to keep the material free from contamination in storage.

6. *Average Storage Factor*. Twenty-one net cubic feet per short ton for crude ore; slightly more for calcined ore.

FOR ADDITIONAL INFORMATION ON THIS COMMODITY REFER TO THE MATERIAL SAFETY DATA SHEET OR THE MOST RECENT PURCHASE SPECIFICATION.